PURDUE
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Operation risk and safety manual

The PIC should go through each bullet when considering an operation, and use the operational risk management process to determine if application can be completed safely.

Operational Risk Management Principles

1. **Accept no Unnecessary Risk**
    a. **Do not begin an operation if an identified risk can be reasonably managed prior to mission.**
2. **Make Risk Decision at the Appropriate Level**
    a. **Although the Pilot in Command (PIC) is required to make the most comprehensive review of the risks associated with an operation, all team members should identify potential risks and bring them to the attention of the PIC.**
3. **Accept Risk When Benefits Outweigh the Cost**
    a. **The only risks that should be accepted are those that the benefits of the application outweigh the cost of the potential risk.**
4. **Integrate operational risk management into planning at all levels**
    a. **Begin to identify risks early in the planning stages to avoid possible last-minute changes that can compilate operations, but do not hesitate to make changes for the benefit of safety at any time.**

Consider the following during operation planning:

- Location of the site and the size and shape of the area to be treated
- Types of crops adjacent to the application site
- Proximity of the site to adjacent fields and other areas where field workers may be present
- Local weather conditions
- Proximity of the site to sensitive areas such as parks, schools, roadways, and other areas
- Proximity of the site to environmentally sensitive areas such as riparian areas, wildlife habitats, and sensitive plants and animals.
- Safety hazards such as powerlines, guy wires, antennas, towers, trees, and other obstacles.
- Possible limitations to the operational areas such as access and landing/takeoff area.

If the PIC identifies risks, consider if the risks can be minimized by changing the time or buffer area of the operation or if further preparation at the planned area should be completed prior to operation.

Consider the following during the operation:

- The amount of product being used compared to the planned amount
- Changing weather conditions
- Amount of battery being used compared to the amount the PIC anticipated.
- Length of time the operation is consuming compared to what the PIC anticipated.
- Location and safety of crew members that may be moving during operation.
- Any people, animals, or objects that may enter the application area during an operation.

If the PIC identifies risks, consider if the risks outweigh the cost of the risk and if the operation should be terminated or suspended to avoid unnecessary risks.

Consider the following post operation:

- Was the application confined to the planned area?
- Are there potential product residues on application equipment that should be cleaned before handling?
- Does the amount of product used during the operation reasonably match the amount planned?
- Were there any potential product exposures to team members working during the operation?
- Is there reason to believe product exposure to people may be of concern after the operation?
- Was communication fluid and open during operation?
- Are all of the required documents completed and retained?

If PIC identifies any risks or hazards, consider if any post application actions should be completed to reduce the chance of product exposure and document any changes that can be implement for the next operation to improve the effectiveness and safety of the mission.